/168 cont./

126 During the night there was heavy dew; in the forenoon we dried Wilhelm's things; it is a pity the way the drawings look, the sheets are stuck together and bent. How could we have brought photographic chemicals through here?

136 At 1:00 in the afternoon slowly off. Several times a sandy shore 20 meters wide; masaricos, small black-white, red-legged shore-birds. Numerous traces of the tracajá turtle; the people poke in the sand with an arrow or generally simply follow the tracks of the tracajá and with their hands dig up the shallow pit that shows the impression of their bodies. In one nest there are 17 eggs, in another 15; the egg is white and gradually shades to gray; 4.9 centimeters long, 3.2 centimeters wide. Temperature of the sand 57°.4. The verdict about the empty nests, merely in passing by, is often: "Here the lizard has fed."

It is wondrously summer-like: current, sun, charming leafy shores, yellow butterflies, and no mosquitoes or wasps. Many novatos. Endless meanderings; we covered about two legoas.

Valentin caught a large pintado fish; see the glossary, p. 171/; Satyr was almost pulled out of the canoe by a pirahyba that was supposedly as long as he was. Loud buzzing and chirping in the night air. The sabiá was singing.

122 17 Aug. φ 13° 7'.3, λ 6'.1, km. 0.57, total 142.32.
132 6:35 A.M.: dry. 11.3, water 23.5.
7:30 P.M.: II 732.0, dry. 21.0.

Shivering I awoke during the night and believed that I had [361] fever. It was the cold. Very soon we arrived in the harbor of the second village.

•227 A fisherman's hut lies at the entrance of the forest; here are baskets shaped somewhat like an elongated spiked helmet, into which, from the inner rim, a small collecting funnel with a narrow 487 opening leads inside. The path stretches inland one legoa and is very similar to the one from the first village.

574 After a few steps we were received by two good acquaintances from Aldea I, who had gone overland to announce us to their fellows. One of them in blue trousers and red striped shirt, the

/175 cont./

168 We counted 27 men, 18 women, and eight children, but
621 as some of the men, who stayed longer than we, reported, a
689 whole troop of women and children later came out of the woods.

342 I measured the largest house more carefully. It was 40 paces long, 24 paces wide. In the center line stood four supporting beams, 8-8.5 meters high (!) and 30 centimeters in diameter, the middle ones five paces apart, the outer ones each six paces
[531] from these; they had several bands painted with geometrical designs.

The distance of the two outer supporting beams from each other, /176/ 17 paces according to the above, also gave the length of the roof timbers. All around, 72 posts, up to 25 centimeters thick, one meter 72 high, served to support the elliptical roof basket. This was also the height of the two entrances, 77 centimeters wide, which lay opposite each other on the long sides and were made somewhat lower by the straw hanging down from the outside.

The roof basket, made up of large horizontal bamboo rings fastened by vertical poles bent against them, which converged at the top and projected to the outside through an opening, was built with great skill and regularity. The covering was made of straw-dry palm leaves. The leaf ribs lay horizontally; the free ends of the individual leaf spears hanging down from them, however, were all bent inward around the bare rib, so that solid mats were produced in the simplest manner. These overlapped like roof tiles.

364 We make the rounds through all the huts. The sense of order
353 of the peaceful professor is lacking. They are full of refuse. In-
[251] stead of the fine supply baskets, balls of the massa /dough/ one meter long, a half meter thick, and packed in leaves are found
[227] on simple racks. Little maize. Many fish nets made of tucum fiber: a wide-meshed bag hangs from a ring 80 centimeters long,
226 35 centimeters wide, which sits on a long pole. They probably get the fish out of the blocked-off lagoons with these nets from the top of their scaffold.

/208 cont./

* 191 239 301 [411] [289] Feathers lend wings to the arrow, on whose shaft end two split halves of feathers are sewed opposite each other in spiral turns. Otherwise they seem to be used exclusively, but in great volume here, for ornaments, such as ear feathers, feather crowns, feather caps, feather arm bands, feather cloaks (among the Kamayurá), and in hundredfold decoration on small ornaments, where little colored bundles hung on hammocks, combs, gourd rattles, arrow throwers, masks, etc. The most magnificent ma- [825] terial was available, from the yellow, blue, red, and green of the arara, toucan, weaver birds, and parrots, from the beautiful stripes or speckles of the curassows, falcons, and owls, to the shimmering white of the herons and storks or the black of the [825] urubu vulture. The big, broad, black-and-white striped flag of the Harpyia destructor was magnificent.

* 171 [239] [412] [433] The spoils of hunting and fishing therefore offered an abundance of the most necessary things; in particular it furnished tools for cutting, scraping, polishing, piercing, boring, scratching, and digging. Agriculture assured the natives a sedentary existence and improved their economic condition, but they still remained fishermen and hunters, though to a lesser extent. They were hunters without dogs, fishermen without hooks, farmers without plow and spade. They afford us an excellent example [32] that teaches us how manifold the methods of work for the purpose of making a living could have been before the possession of any metal technique, an example that warns us about overestimating the importance of stone implements, which, of course are preserved the best and most plentifully for posterity, and about throwing indiscriminately into the great pot of the Stone Age everything that comes before the use of metal and, in comparison to the small span of time established for this, must embrace unimaginably long periods.

* 171 433 511 If one judges culture according to the extent and thoroughness with which the surrounding nature is exploited by the human beings, then our natives certainly did not stand on a low level. [229] They hunted and fished with arrow /209/ and bow; they fished with nets, catch-baskets, and weir-baskets; they had their fish

/209 cont./

*171 433 511 229 hurdles in the river, planted the stream with fences and barriers, and closed off arms of lagoons in order to confine the fish. they worked hard to clear large stretches of forest; they built themselves splendid houses, piled up considerable supplies in them, filled them with a great variety of things from an industrious craftman's skill, arrayed themselves with gay body ornaments, and decorated all their implements with graceful design. In

*171 511 view of the fact that the people of Cuyabá have showered me with angry newspaper articles to the effect that I have said the savages of the Schingú had neater and better homes than many people of the Mato Grosso, I should like, without comparing reasons, to set their minds at rest by adding that even in old Europe there are plenty of villages in the mountains and along the coast where people lead a more miserable life than on the Kulisehu.

*171 241 I shall list the cultivated useful plants which we observed among the Indians. They are arranged, under A, as those that were common in the northern part of South America before the Europeans appeared, and, under B, as those that grew wild in the immediate environment:

A.

Maize	Zea mays.	Cotton	Gossypium.
Mandioca	Manihot utilissima.	Cuyeté	Crescentia cuyeté
Batatas	Convolvus batatas.	Bottle gourd	Cucurbita lagenaria.
Cará	Dioscorea.	Edible gourd	Cucurbita.
Peanut	Arachis hypogaea.	Mamona	Ricinus.
Bean	Phaseolus.	Urucú shrub	Bixa orellana.
Pepper	Capsicum.	Tobacco	Nicotiana tabacum.

B.

Bakayuva palm	Acrocomia.	Genipapo	Genipa.
Pikí	Caryocar butyrosum.	Arrow reed, ubá	Ginerium parviflorum.
Mangaba	Hancornia speciosa.	Spear grass	Scleria.
Fruta de lobo	Solanum lycocarpum.	Pita bast-plant	Fourcroya? Agave?

/235 cont./

on the fishing of the Bakaïrí with catch-baskets in the shallow campo lagoon. The natives like to fish between the stones on dark nights by torchlight. We did not see any poisoning of fish.

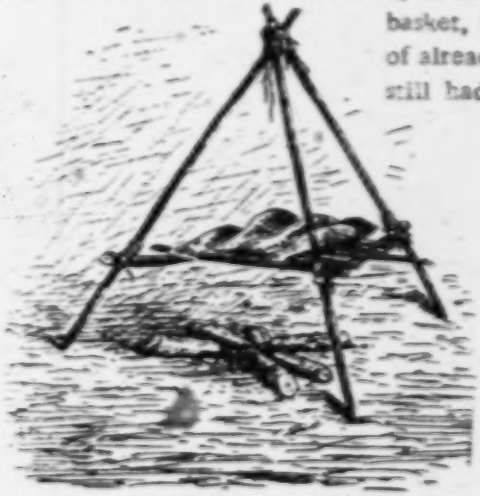
It is a fact of great significance that the fishhook was unknown to all these tribes of such diverse origins, tribes of such avid fishermen. It argues persuasively for the frequent claim that the hook was introduced only by Europeans in the north and south of Amazonas. If this is not the case, the only way out is that our tribes left their original homes before the hook was known there. For, anyone who saw, as I did, with what interest the natives became acquainted with our fishhook will smile here, if anywhere, at the thought that the degenerate Indians have forgotten an invention well known to them formerly -- when they were still close to the point of departure of the Karaiben /Carib/ or the Nu-Aruak /Arawak/ or the Tupí or the Gēs. It is understandable that Indians under peaceful circumstances no longer make any clubs, it would be understandable that one or another of our tribes had migrated here from Amazonas and gave up the wooden canoe because they got along excellently on the upper course with the easily constructed bark canoes, but that fishermen who had formerly fished with a hook and line gave it up in a region where they might continue practicing the skill to great advantage and that their descendants are obliged to let themselves be taught anew by us, let anyone believe that who can. In Guaraní and Tupí /236/ hook, and especially fishhook, is called pinda, and from this word, in both dialects, Xylopia frutescens, which furnishes the fishing rod, is called pinda-iba = hook-rod. For the Kamayurá, who certainly leave nothing to be desired in Tupí purity and to whom we seemed to be tribal brothers with the comparison of the words that we had in common, the correspondence failed for this particular plant: they did not know pindaiba and called it ivíra or ivít, the ymbira of the Tupí or hybir of the Guaraní (= "skin-tree"), according to Martius "name of various Bombaceae and Xylopia." The decadent company had also forgotten the plant name "hook rod," although it was so easy for them to remember.

/236 cont./

*171 227 [249] The nets, merely small hand nets, were plaited out of the twisted, very resistant tucum palm fiber. They hung as a pouch from a piece of vine with both ends bent together in an oval.

*171 227 285 Two types of weir baskets were distinguished: the puroschi of the Bakairí, wider, fuller with horizontal, rectangular interstices, and the other, tamaschi, narrow, long, with wide, high vertical meshes. The catch-basket, kutu, was a plaited framework of pointed sticks, shaped like a truncated cone, and open at the top and bottom. I watched Paleko as, in order to make a catch-basket, he evened up a bundle of already pointed sticks which still had different lengths. He used the following measuring stick. He took a piece of shaft reed, a-b, and another, c-d, tied them together one under the other parallel at b and c, and now used the free piece from c-d for measuring, placing the stick to be measured alongside it, pressing it against b, cracking it sharply at d, and breaking it off.

*171 227 285 804



[252] Fig. 30. Roasting rack (trempe). (1/30 nat. size /as shown in the original illustration/.)

*171 251 252 The Indians often set out for a few days to engage in fishing. They bring home baked fish, but they also seem to be satisfied merely to eat their fill for once outside. The pyramid of the grill, the "trempe" of the Brazilians, which one almost always finds where the Indians have stayed overnight to fish or to build a canoe, is finished in no time. Three sticks are placed together like rifles and are joined at the top with bast, somewhat below the middle a little rod is placed crosswise from one stick to each of the two neighboring ones and is lashed, and this angle

/257 cont./

539 in quiet areas, where there are no human beings, it is always
825 on the move in the morning and afternoon, except during the hot hours in the middle of the day which it spends sleeping"; in other words, all of the phrases between quotation marks, taken from the book by Dr. Goeldi on the mammals of our land (pp. 92, 99, 103, and 106), confirm what has been said concerning the shadowy character of the Yamũras.

539 /258/ Other considerations, however, seem to us of
174 greater moment.

First of all, in the enumeration of the belongings of the Yamũras, we have a basis for a list of the cultural acquisitions of the Bacaeris. We learn that they had nets for fishing before [220] [352] [501] [412] [532] they had nets /hammocks/ for sleeping, that they traveled by water when they did not yet have pestles, and that they probably had maracá before they had the masks with which they appear at their festivals.

539 We also see that although theoretically the abode of the
776 Yamũra is in the sky, a large part of his existence is spent on the earth from which he derives his sustainance. Subsistence, however, is not his sole concern; free of the contingencies of time and space, he travels swiftly as the wind, he is an envious being who spies upon all actions and weighs upon the living with crushing pressure. There is hardly an act that he does not influence: gestation, childbirth, alimentation, festivals, walking hours, everything falls within his inexorable reach, as we shall see later. It would seem that the Bacaeris could paint their bodies as they please. But this is not so.

776 Yamũra does not like urucũ, --this is why one must not
789 scatter the urucú seed, says the piahi;--Yamũra goes into the
824 houses of people with children, --this is why we burn the juice
302 of the rubber tree--when it is burned it is rubbed on the door;--fathers of boys, when they go to the river, paint themselves with genipap, --paint themselves with urucũ, --so Yamũra thinks that it is blood; if the boy's father does not paint himself

285
531 /44 cont./
184 direction, while the corresponding parts of the lateral walls and corresponding plaited supplements have vertical striping.

285 Examples of the kind of plaiting called by me in my
227 respective previous publications Doppelfadengeflechte (double-
184 thread plaiting) are represented by the fish trap shown in Figure 54 and the flat basket shown in Figure 55. Fish traps like the one shown in Figure 54 (V.B. 9914. Length 54 cm. Diameter of the upper rim 25 cm.) were very common among the Bakairí of the upper Xingu tributaries, and the Berlin Ethnographic Museum possesses several specimens collected by Karl von den Steinen, who mentions them briefly in his above-mentioned book, Unter den Naturvolkern Zentral-Brasiliens. (53) He says

53. Karl v.d. Steinen, Unter den Naturvolkern Zentral-Brasiliens, loc. cit., p. 236.

there: "As for fish traps, there were two kinds: one called by the Bakairí puroschi was broader and had rectangular intermediary spaces, while the other, called tanaschi, was narrow and long and had high, large meshes oriented vertically." In Karl von den Steinen's book, there is no drawing or photograph of such
126 a fish trap. The specimen which I got from the Simões Lopes Bakairí and which they call tikíshi consists of slender twigs bound at regular intervals by a double strand which, starting at the bottom, goes through the twigs in spiral fashion. A funnel-shaped entrance made of thicker twigs is placed at the upper edge.

285 The flat basket shown in Figure 55 (Length 65 cm. Width 37 cm.) serves to store fish and consists of a wooden hoop filled in with double-thread plaiting in the form of a small mat like those the Bakairí used to strain their liquids.

Finally, I must mention the small basket shown in Figure 56 (V.B. 9891. Height 20 cm. Width of the upper rim 19 cm.)

4:Schmidt--81 ... F. 5 (1901 1927 1931) 1947 SP7 Bacairi SP7

Plate XXIII

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Fig. 34 Fish trap of the Bakairi in Xingu Tapé

Fig. 35 Flat basket for keeping fish. Bakairi in Xingu Tapé

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Fig. 36 Basket of the Bakairi in Xingu Tapé